

March - May 2010 Edition 50

ICE *Breaker* MAGAZINE

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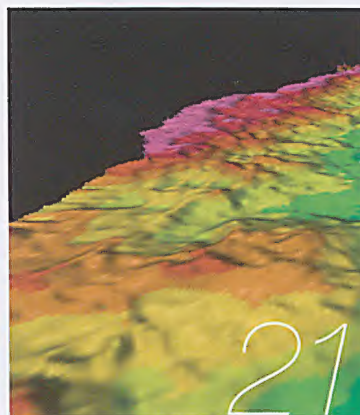
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50Th Edition

An Appreciation by

The publication of the 50th edition of Ice Breaker is a significant milestone. In the 12 years since its inception the magazine has made a most valuable contribution to the Tasmanian Antarctic community.

Ice Breaker is a lively news magazine with stories about current developments and events covering virtually every part of the Antarctic sector. They include many articles and hundreds of short pieces relating to everything from the activities of Antarctic expeditions, stations, organisations and institutions through to conferences, business news, education and research and development in science and technology.

Welcome to the 50th Ice Breaker, and many thanks to everyone who has worked so hard to make this one so special. This is the first edition prepared for offset printing and readers who have followed the magazine from its beginning 12 years ago, will notice (I hope!) the changes made since the first edition, which was produced with a typewriter, cutting and pasting pages and photocopying. I am very grateful for Tasmania's Honorary Antarctic Ambassador, Sir Guy Green, for providing the following appreciation of the magazine.



Included in this issue are exciting images of mapped icebergs in Greenland and a school excursion to the Antarctic Peninsula. In addition, there are features on Macquarie Island's bi-centenary this year and an outline on next year's centenary celebrations for Mawson's and Amundsen's Antarctic expeditions.

It is good news to hear that Hobart's National Archives Office will be retained, after some vigorous objections from several groups concerned with the relocating of Tasmania's historical documents, particularly relating to Antarctica and the Southern Ocean. As Australia's second oldest city, Hobart is entitled to retain its own archives, even if the Office will now share space with another organisation.

Midwinter activities in Hobart this year were still being arranged at the time of publishing this edition and I hope to be able to provide details in early June.

Anthea Wallhead

Editor, Ice Breaker



Sir Guy Green, Honorary Antarctic Ambassador for Tasmania

The award for the longest running story must go to the saga of the development of the air link between Tasmania and Antarctica: the cover of the first edition of Ice Breaker carried a picture of an aeroplane and the banner "Hobart flies into the 21st century" and all but a few of the next 49 issues, including this one, contains at least one story related to the air link.

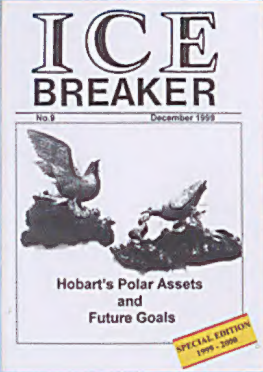
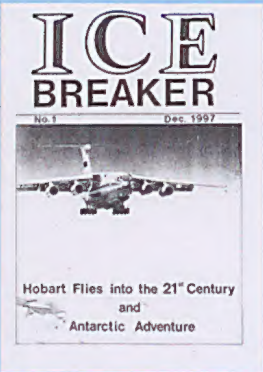
As well as dealing with current matters Ice Breaker also regularly publishes substantial articles or series of articles about topics of enduring interest, including historical pieces as diverse as reminiscences about Macquarie Island, a history of Australian Antarctic aviation and an account of Herman Goering's bizarre Antarctic colonial venture.

Ice Breaker provides a valuable forum for informed reports and comment on a regular basis from Government, political leaders, the Tasmanian Polar Network, the Hobart City Council and other individuals and organisations working in Antarctic or cognate fields. Typical of the issues which have been raised is the role of the Port of Hobart.

Ice Breaker is also a useful source of reference material such as basic information about Antarctic Treaty parties, glossaries of Antarctic terms, explanations of the zoo of Antarctic acronyms, website addresses, a calendar of Polar events and a shipping and air calendar. Informed by the concept of advertising as a service, Ice Breaker's attractive advertisements are also a source of interesting and useful material.

In short, Ice Breaker is a quality journal of record, a forum, a helpful resource and a vehicle which facilitates and encourages communication and interaction between members of the Tasmanian Antarctic community. As such, Ice Breaker helps to reinforce a sense of identity and shared purpose amongst those engaged in the many and diverse aspects of Tasmania's endeavours in Antarctic affairs and makes a real contribution to promoting Tasmania's standing as one of the most significant Antarctic and Sub-Antarctic centres in the world. ■

5Th Edition
December 1997 - March 2010



Six of the of the fifty covers from the last twelve years of Ice Breaker magazine.

Sir Guy outside "Chippy's Church" on Macquarie Island in 2007.



Michael Aird

...Australia claims jurisdiction over more of the earth than any other country...

The Tasmanian Labor Government has collaborated in building an internationally recognised Southern Ocean and Antarctic logistical, administrative and research community based in Hobart. It is estimated that this community of research, shipping, engineering and policy organisations spends over \$100 million in Tasmania at an annual growth rate of 12 percent.

An interesting fact that I came across recently is that Australia claims jurisdiction over more of the earth than any other country (around 27.2 million square kilometres or 5 percent of the planet, ahead of Russia and the USA).

Of this, Australia's maritime domain is around 4 percent of the planet's oceans. I believe this is one of the reasons why Tasmania is home to a vibrant and diverse science and research community. Whilst only 2.3 percent of Australia's population is located in Tasmania, 4.2 percent of Australia's scientific research organisations are located in the state.

Tasmania now offers not only a geographic advantage but has world-leading expertise, an integrated cultural and marine precinct and a number of highly skilled small businesses that can provide niche products and services to this growing industry.

Labor is committed to further developing Tasmania as the centre for excellence in southern oceanic research and Antarctic activities. This will have a positive impact across many industry sectors and become a key economic driver for Tasmania. Tasmania is clearly well positioned to maximise opportunities from growth in this area.

providing around \$93 million of products and services, some of which are driving innovation. None more so than the modified Caterpillar tractor-train, developed by local businesses in conjunction with the Australian Antarctic Division, to traverse across the Antarctic wilderness for over a week providing much-needed supplies to the inland bases.

Logistics is the key platform to enabling safe and secure Antarctic and Southern Ocean operations to exist, not only for science personnel but also for bio-security and defence.

Our sea and air port facilities are ideally located and can be expanded further to capitalise on the growing opportunities in this industry.

Hobart is already the home port for

the Australian and French marine research and Antarctic re-supply vessels. Labor, if re-elected, will actively promote even more international business to take advantage of what Tasmania has to offer – including greater utilisation of the \$100 million Australian-Antarctic air link.

Tasmania is the only state government with an office dedicated to Antarctic affairs and Labor is absolutely committed to not only continuing to support our Antarctic sector but to growing it even further to become one of the state's key economic drivers.

Michael Aird

Minister for Economic Development

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Autumn



Elephant Seal

Length: 3-6.5m (male larger)
Weight: 680-2400 kg
Lifespan: 14 years

Males are the largest in the world of all seal and sea lions. Females are between a third and half the size of a fully-grown male. They feed on fish and squid and dive down to 1000m to find food.

Tasmanian businesses are already

Photos: Sue Halliwell



Will Hodgman

...Tasmania missed out on the \$22 billion in federal infrastructure money...

One of the elements that is vital to Tasmania not only remaining a leading Antarctic staging point, but also to developing that potential, is ensuring that local infrastructure can support it.

There is no doubt that the current government's lack of a long-term infrastructure plan for our ports, roads and other public infrastructure was a factor when Tasmania missed out on the \$22 billion in federal infrastructure money handed out to all the mainland states and territories in the federal budget last May. This must be addressed.

The Tasmanian Liberals have a very clear and strong policy to address the lack of infrastructure planning that has occurred over the last decade.

Upon its election, a Hodgman

Liberal Government would establish Infrastructure Tasmania, an independent body that will be tasked with reporting on the current state of our critical infrastructure, identifying future needs and recommending priorities to the Government.

Infrastructure Tasmania will work along similar lines to that of Infrastructure Australia. It will take an holistic approach to Tasmania's infrastructure and will take the planning and implementation of our needs out of the hands of politicians and the political cycle. And one of the things it will look at is the infrastructure of our working ports, which is directly relevant to Antarctic support.

Infrastructure Tasmania will be comprised of people with expertise

and experience in the infrastructure area, including someone with experience in local government and it will be supported by a small secretariat drawn from appropriate Government agencies.

The Tasmanian Liberals believe through Infrastructure Tasmania we can finally begin fixing the mess that Tasmania's infrastructure has been left in over the past 12 years. A Hodgman Liberal Government will deliver the real change that Tasmania desperately needs.

Will Hodgman

Leader of the Opposition



Leopard Seal

Length: 2.7-3.7m (female larger)
Weight: 275-450 kg
Lifespan: about 25 years

Females become pregnant and pups will be born 8 months later. Seals hunt alone and feed mainly on penguins and other seal species, particularly crabeaters, around the islands and the edge of the ice.



Weddell Seal

Length: 2.5-3.2m (female larger)
Weight: 400-450 kg
Lifespan: up to 18 years

Weddells mostly eat fish and squid, often diving down to 600m to catch Antarctic cod. They fish close to solid ice edge of the continent and cut holes in the ice with their teeth in order to breathe.



Crabeater Seal

Length: 2.4m-2.6m (female larger)
Weight: 200-300 kg
Lifespan: over 30 years

Crabeaters fish for krill, crustaceans and other small fish, from floating pack-ice off the Antarctic coast. They suck in water and use their unique interlocking, 5-pointed teeth to sieve the fish from the water.



Cassy O'Connor

...Australian charter aircraft, flying out of Tasmania, to spy on the Sea Shepherd vessels.

The dispute between Japan and Australia over whaling in the Southern Ocean off Antarctica has built up a head of steam in recent months, during which,

- the Rudd Government has flip-flopped over a 2007 election promise to take the Japanese whalers to the International Court of Justice;
- the Japanese whalers have endangered lives at sea, ramming and eventually sinking a stationary Sea Shepherd protest vessel (the whalers' decision to continue attacking the crew of the rammed vessel with a water cannon while they were struggling in fear for their lives was an especially inflammatory act); and,
- it has been revealed that the whalers have been using Australian charter aircraft, flying out of Tasmania, to spy on the Sea Shepherd vessels.

The Federal Government's response to news that Australian companies are being used to aid illegal whaling inside

Australia's declared Whale Sanctuary was pathetic. The Greens have now been forced to respond with the tabling of a Private Members Bill in the Australian Senate.

Western Australian Senator Rachael Siewert tabled the Bill, which seeks to create new offences and new penalties for organisations providing support or resources to whalers. Since being tabled, the Liberal Party has indicated its support, giving the Bill every chance of passing the Senate, and being sent to the Labor-dominated House of Representatives for final assent, or rejection. (By the time you read this article, the result should be known.)

The behaviour of the Rudd Government during the current whaling season has been Orwellian to say the least. Mr Rudd, and Environment Minister Peter Garrett, have been talking-the-anti-whaling-talk since late 2006. But after coming into power in 2007 Labor have not only failed to walk-the-walk by taking positive

action, they have actually reduced Australian monitoring activities in the Southern Ocean, leaving the Sea Shepherd protestors alone to defend the Australian Whale Sanctuary from the Japanese Government-backed whaling fleet.

It is time that Labor matched its long-term rhetoric with action, and stood up on behalf of our whale sanctuary, as well as the brave Sea Shepherds who are doing their best to stop these ignoble and dishonest killings in the Southern Ocean.

Cassy O'Connor

Tasmanian Greens Spokesperson on Antarctic Affairs

Remnants of the whaling days with an old try pot, on Macquarie Island.

Copyright Sue Halliwell 2006.



Old try pot on Macquarie Island. Copyright Sue Halliwell 2006.

Victoria Land

Ross Sea

Ross Island

Bay of
Whales

Centenary of Australian Antarctic Expeditions

The years 2011, 2012 and 2013 will celebrate a number of centenaries associated with Sir Douglas Mawson's Australasian Antarctic Expedition 1911–1914 and Roald Amundsen's Norwegian Antarctic Expedition 1910–1912.

The Australasian Antarctic Expedition is today regarded as one of the greatest polar scientific expeditions of all times because of the detailed observations in magnetism, geology, biology and meteorology that were made.

Hobart has historic connections to these famous explorers.

Norwegian Roald Amundsen (above)



was the first explorer to reach the South Pole. He is regarded as one of the greatest figures in the history of polar exploration; he was also the first to sail through the Northwest Passage, and the first person to reach both North and South Poles. On March 8, 1912, from Hobart's newly built General Post Office he sent his news to the world that he had reached the South Pole ahead of the ill-fated British explorer Scott. To keep his news secret until he had informed his King, Amundsen kept his men quarantined aboard their ship (anchored off Sandy Bay) while

he dealt with Hobart's Director of Telegraphs, Frank Bowden. Amundsen became an instant local celebrity.

A round of dinners, speeches and honours awaited the crews. Some members watched yacht races on the Derwent and Amundsen was made an honorary member of the Derwent Sailing Squadron.

From 1911 to 1914 Douglas Mawson (right) led an expedition in Aurora and set out from Queen's Wharf, Hobart on 2 December 1911. A special service for the expedition was held in St David's Cathedral on Sunday 26 November and on 2 December 1911 final best wishes were extended from the Governor of Tasmania, Sir William Macartney. Mawson left a radio party on Macquarie Island so that they could relay messages from Antarctic to Hobart. He returned twice to Hobart, on 14 December 1912 and 14 March 1913.

Antarctic Tasmania will establish a management committee for these celebrations and has already had meetings with interested stakeholders.

Major events confirmed for the celebration of the centenary.

National Archives of Australia will be launching an exhibition at TMAG in early December 2011. It will tell an extraordinary range of stories about Australia and Antarctica: from Mawson's first trip in 1911, to the removal of the huskies in the 1980's, through to the future of Antarctica as a tourist destination. There are also the many extraordinary scientific explorations and discoveries by Australians and others. Through the use of stunning imagery, original artefacts, oral histories, and current technologies, the exhibition will capture the many different elements of life in Antarctica over the last one hundred years. After Hobart, the exhibition will open in Canberra and



then tour nationally for up to four years.

Mawson's Huts Foundation has already planned a re-enactment of the first voyage of the Aurora, berths will be sold by the Foundation and any profit will be directed to the future conservation on the huts. A dinner at the Grand Chancellor will commemorate the departure of the Aurora and all departing vessels will sail the next day for Antarctica.

Other events planned are an education program run by TMAG, Commemorative coins and stamps, a contemporary art exhibition, a musical, and a lecture series.

This will be an exciting time for Hobart and the Antarctic community. If you would like to be involved in these events or have any suggestions or ideas for the celebrations please contact Mary Woolnough at Antarctic Tasmania – Phone 6233 5493. ■

More details of Centenary events in upcoming issues



John Brennan

...seeking new opportunities to further enhance Tasmania's position...

Over the Christmas/New Year period I was very pleased to hear about the likely discovery of the Vickers airplane fuselage that was used by Mawson and his team close on 100 years ago. This amazing find will no doubt create more interest and hopefully much needed support for the Mawson's Huts Foundation. Who knows, maybe one day we could see this cherished contraption in Hobart along side a replica of Mawson's Hut! The TPN will be hearing more from the foundation about their season's activities, including the discovery, at its March general meeting.

Off the back of last year, the TPN committee has been busy contemplating the year ahead. We have defined our action plan for 2010 and the two main foci for the organisation include the working port, and seeking new opportunities to further enhance Tasmania's position as a prominent East Antarctic gateway.

- The recently released plan by the State Architect provides comforting recognition of the importance of the Antarctic sector and the working port. We are working diligently to remain informed about the various decisions and plans which are being formulated for the re-development of the port and its environs. Meanwhile, Tasports have started a round of consultation for the redevelopment of the Macquarie 2 Wharf facility and TPN will be having input.
- The first meeting for an East Antarctic Working Group was held prior to Christmas at which the terms of reference and directions were broadly defined and discussed. There are two distinct opportunities for the TPN and sector as a whole. The first is to attract other nations to Hobart and thus stimulate our educational/research/business/commercial sectors respectively and the second involves cooperation between East Antarctic gateway nations to define opportunities. The recent delegation of

Hobart City Council to Christchurch, New Zealand, for the signing of an agreement between the relevant nations is evidence enough to suggest that the time is right.

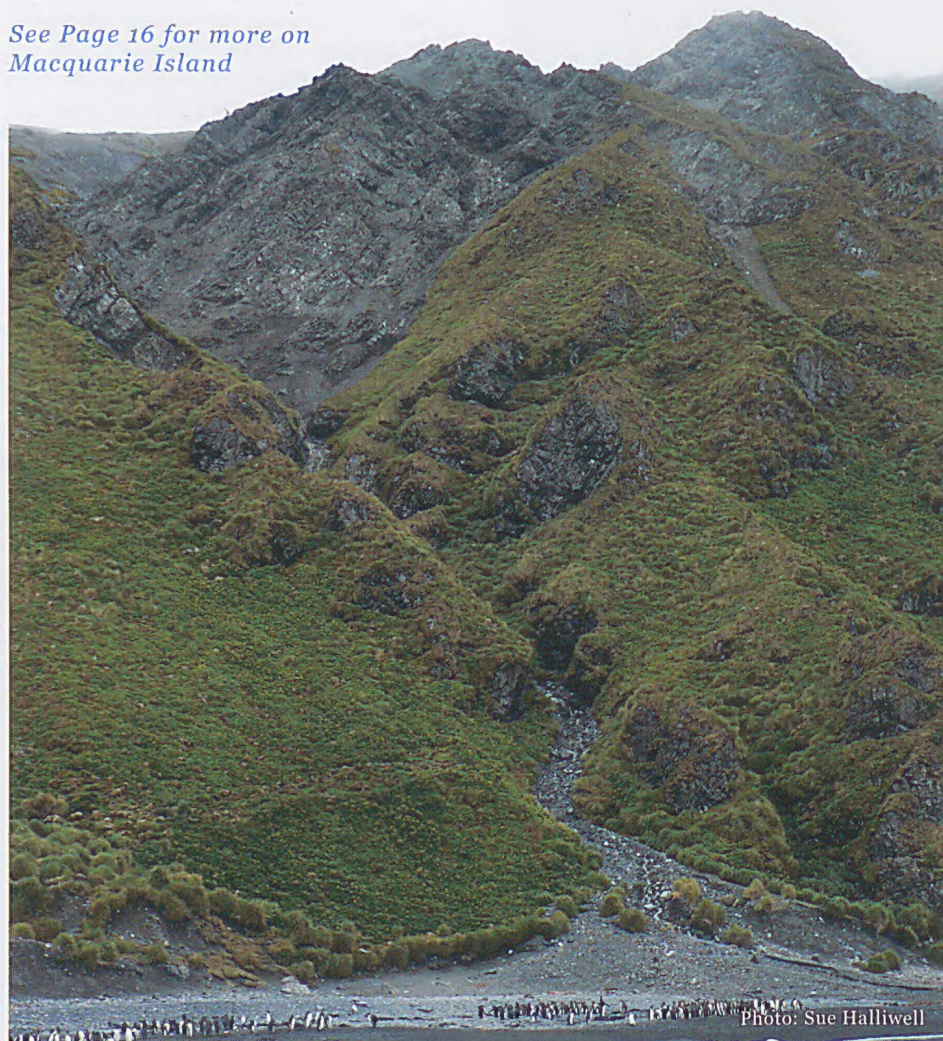
The departure of Anthea Pritchard from Antarctic Tasmania, Science and Research (ATSR) leaves a gap which the TPN is hopeful will be filled accordingly. Although in the position for a very short time, Anthea was a true dynamo and with her creative crew, who, luckily enough are still on board, worked constructively with the TPN. The important contribution of ATSR to the sector should not be underestimated.

Finally, history has shown that the TPN has received consistent and bipartisan support for many years. With an election around the corner we hold a degree of optimism, that whatever the result, the sector at large will receive the support it deserves. As a community, which is blessed with a distinct natural advantage, there is a great future ahead for science, research, education, and commercial activities including tourism, if we continue to play our cards right.

John Brennan

Chairman, TPN

See Page 16 for more on Macquarie Island





Tony Press

Sir Douglas Mawson's legacy: Why science in Antarctica is important for Australia

This time one hundred years ago, Douglas Mawson was preparing for his historic voyage to Antarctica. Mawson's purpose was to be among the first to explore the frozen continent, and to research a part of the globe that was devoid of scientific observation. From these pioneering efforts two great Australian legacies evolved: Australia's claim to 42 percent of the Antarctic continent, and a long and proud reputation for world class and ground breaking Antarctic science.

In February 2010, in the prestigious journal *Nature Geoscience*, Australian glaciologists Tas van Ommen (AAD and ACR CRC) and Vin Morgan (AAD and ACE CRC, now retired), described how rainfall in one of Australia's most important agricultural areas is linked to weather patterns and snowfall in Antarctica. Using an ice core drilled at Law Dome near Casey Station in the Australian Antarctic Territory, Tas and Vin have shown that higher snowfall in that part of Antarctica coincides with drought in southwest Western Australia.

The decline in rainfall of about 17% in this part of WA since the 1960s corresponds to an increase in snowfall at Law Dome. This discovery could become an important piece of Australia's weather and climate jigsaw puzzle.

While there are complex weather and climate factors that may explain this important finding, the significance of this serendipitous discovery is worth exploring. The scientists who drilled the ice cores were not doing research on rainfall in Western Australia. Rather they were attempting to discover and describe in fine detail the recent (up to ten thousand years ago) climate of Antarctica. They were able to do this because of a history of research dating back to the late 1950s and subsequent studies of glaciers and ice cores by Australian scientists over a long period of time.

Early ice cores weren't drilled to

study past climate. They were drilled so that researchers could find out the temperature of glacial ice at different depths below the surface. As scientists gradually understood that fallen snowflakes contained traces of chemicals and trapped small bubbles of air which were eventually held in the ice, they developed sophisticated techniques for analysing these time capsules of past climate – techniques that can accurately describe the earth's atmosphere as far back (so far) as 800,000 years ago.

Australia's current Antarctic science efforts began in 1954 with the establishment of Mawson station, the oldest Antarctic continental research station. Our ability to make these kinds of groundbreaking discoveries in Antarctica relies on a history of past effort and achievement, and the ability to plan and support future scientific endeavour.

There are many more important questions to be answered about how the planet works: Can we find an ice core that can accurately describe climate beyond one million years ago? Is the Antarctic ice sheet growing or shrinking? What will this mean for global sea-levels? Is the Southern Ocean around Antarctica changing and what does this mean for global ocean circulation and life within the oceans?

How much do Antarctica and the Southern Ocean affect Australia's weather and climate? There will also be other important things discovered serendipitously along the way.

Australia is well placed to play a central role in research on global climate and climate change through its science efforts in

Antarctica. In order to do this it is crucial, as pointed out in the Australian Strategic Policy Institute's study *Frozen Assets: Securing Australia's Antarctic future* that Australia continues to adequately fund and support its Antarctic efforts.

There is much, much more to be discovered and learned by those following in Sir Douglas Mawson's footsteps.

Tony Press

CEO Antarctic Climate and Ecosystems Cooperative Research Centre

An edited version of this article appeared in The West Australian on the 8th February 2010

Ice Core. Photo: Joel Pedro.





Extreme Excursion

Many children and students have travelled to Antarctica in the past. Some Argentinean kids have even been born there. Indeed my own kids have been to east Antarctica, my son Kip having his fifth birthday at Mawson's Hut. Most have arrived on a cruise ship, a handful has flown in and a select group of intrepid families have sailed south. But, as far as I can determine, teachers had never before opted for a sailing expedition to Antarctica as a school excursion.

While at Davis Station in October 2008 I was contacted by Geelong Grammar School teachers Stephen 'Percy' Pearce and Justin 'Robbo' Robinson. 'We want to go to Antarctica', was their simple request and I offered the options of cruise ships and flights. 'We really want to sail down and experience Antarctica on a more adventurous level'. Great idea I suggested, while silently pondering that they will never get it past lawyers and insurers, let alone the Headmaster.

Needless to say, every hurdle was overcome and we contracted Cath Hew and Darryl Day from the Aussie expedition yacht Spirit of Sydney and French yacht Podorange to sail 13 students between 15 and 18, teachers

Percy and Robbo and me south from Ushuaia in Argentine Tierra del Fuego.

We crossed the Drake Passage to the Antarctic Peninsula in four days, thankfully avoiding the nasty weather and seas the Drake is famous for, arriving at Port Lockroy on December 11. Both boats and their crews were exceptional and we felt very secure at sea. I was on board Podorange with seven students and Percy, and three crew including French skipper-owner, Brice Monegier.

With a clear sky and light winds we approached glittering Antarctica amidst gasps from all on board. It was a rewarding experience for me to see the reactions of these young people to their first encounter with this great southern land. Cameras clicked and whirled.

Our protected anchorage at Port Lockroy, near Anvers Island off the west coast of the northern Antarctic Peninsula, was surrounded by spearing mountains, icecliffs and islands inhabited by Gentoo penguins and Crabeater and Weddell seals.

The British station of Port Lockroy

is visited almost daily by a constant stream of cruise ships. The students were universal in their opinion that visiting the Peninsula by sailing boat gives a more intimate, exciting and adventurous perspective of Antarctica.

Using the inflatable tenders we paid a quick visit to the station, then set about planning our ski traverse of Wiencke Island to the east of Anvers Island. The following day, with 6 students - Eilish Costelloe, Jack Macaulay, Camilla More, James Calvert-Jones, Namo Vishudipol and Nick Fletcher - and Percy, we were dropped off by Spirit on the northern end of Harbour Glacier. A lazy Crabeater seal watched as we sorted our gear on the beach.

Towing sleds each, we booted up a steep snow ramp onto the glacier. Here the clouds lifted revealing the jagged peaks of the Wall Range to our east and the equally spectacular Noble and Jabet Peaks to the west. Following a fine line between avalanche terrain and crevasses we skied south, reaching a pass at 4.30pm. Here I made the awkward discovery that the bulk of the tents had been left on Spirit. Oops! What a professional! With 24-hour daylight

and both our anchorage and Damoy Hut less than 2 hours away, it wasn't a serious oversight. No-one was particularly keen to be anywhere else but amongst these mountains so I decided to stay and pitch the single tent and build a large igloo. Three hours later, as we eased the final block into the roof, a blizzard raced in from the north and we were soon snug inside, oblivious to the furor outside. Unfortunately blizzards usually bring warmer temperatures and, together with the stove warming our dinner, it became too warm and the igloo began dripping. We all squeezed into the tent for a couple of hours to give the igloo time to freeze up before the four boys returned to the igloo for a drippy night.

Next morning the wind dropped and

the clouds cleared. An hour of digging and we had the sleds and skis extracted from their snowy tombs. We skied south around Jabet Peak to Damoy Point on the western tip of the island, where we met the other students and staff - Nina Frielink, Lachy Robertson, Nathan Dabkowski, Ben Johnston, Angie Halas, Max Cameron, Nina Hanni and Robbo - who had been doing some restoration work on the Hut. We all bunked in the hut for a night of banter then skied back to the boats the following day. Unfortunately poor weather and an urge to sail south to the Argentine Islands prevented the second group from doing a return journey.

The following day we sailed through



Extreme Excursion

Text and photos: Eric Philips

the stunningly beautiful Lemaire Channel to Vernadsky, the Ukrainian base nestled amongst the pretty Argentine Islands. The men based there thrashed us in a game of soccer on their snowy pitch then pampered us with warm hospitality. The weather over the next few days was generally pretty ordinary but windows of calm enabled me to get the students off the boats for some ice climbing on nearby cliffs, sea kayaking amongst the islands and icebergs and skiing over a nearby island. We also visited Wordie House, an old British hut that is being restored by a UK-based historic hut restoration team. Wordie Hut was the site used by Australian John Rymill during his British Graham Land Expedition of 1934-37.

On December 21, the southern summer solstice, we left our anchorage and crossed Penola Strait to make landfall on the mainland of Antarctica. This was the icing on the cake for these young adventurers, particularly as Antarctica's mountains and icebergs were glistening under a beautiful southern sun.

The Peninsula is one of the most scenic parts of Antarctica that I have seen and it's no wonder that, with its proximity to South America, so many stations, tourists and expeditions make their way here.

Saying goodbye to Antarctica, we headed north into the Drake Passage again to do battle with the wind and waves. Four days later, South America emerged over the horizon and we anchored just south of Cape Horn in a protected bay. Here we celebrated what is probably the most memorable Christmas I've ever had. Santa hats, one of crewman Juan's famous roasts, a kilo of Argentinean chocolate and calls home on the Iridium phones, with the Horn just over the horizon, rounded off an unforgettable day. The following day we sailed to Puerto Williams on Chilean soil, returning to Ushuaia the following day, and journey's end.

There was not a single student that in hindsight we would have exchanged for another. The selection process and subsequent training program that included sailing, sea kayaking, rope-work and a week of skiing, hiking and teamwork in Victoria's High Country, prepared them well.

But what extracted the best from each and every one of them was the utter conviction amongst all of them that this was an opportunity that they could ill-afford to squander.

More important though is the ambassadorship that these students return with. As a result of climate change the Peninsula is warmer than ever, rain is prevalent and some hills are becoming green with moss. As we know, the future of the Earth will become the responsibility of our younger generations, and we encourage these students to take an active hand in turning the tide against climate warming. If only every student could have the opportunity to experience Antarctica. ■





Rob Valentine

...it is clear that Hobart is in a very fortunate position.

Having heard of initial preparations for the 2010/11 Mawson Centenary Celebration and the expedition to work on Mawson's hut this summer, I am reminded of the historic links Hobart has to Antarctica.

The long-term importance of these historic links was impressed upon me during my recent visit to Christchurch in September 2009 to attend the opening of the New Zealand Antarctic season.

While there I signed, on behalf of the Hobart City Council, a "Statement of Intent between the Southern Rim Gateway Cities to the Antarctic".

The intent of the agreement is to build understanding and foster links between the five Antarctic Gateway Cities of:

- Hobart, Australia;
- Christchurch, New Zealand;
- Cape Town, South Africa;
- Ushuaia, Argentina; and
- Punta Arenas, Chile.

The signing of this agreement is significant because it reinforces Hobart's reputation globally as one of five major Antarctic Gateway Cities.

Having now had the time to reflect on my visit to Christchurch, it is clear that Hobart is in a very fortunate position. It would appear that no other city has the degree of mix or number of Antarctic related institutions and businesses as Hobart. This combination of activity and resources means that Hobart can provide what few, if any other cities in the world are able to provide – a comprehensive Antarctic and Southern Oceans leadership, research and supply destination.

Furthermore, after meeting representatives from each of the cities involved in the Agreement, it is evident that other cities are trying to replicate the extremely successful model of the Tasmanian Polar Network (TPN). The TPN is clearly highly regarded globally for the way in which it brings together

both private and public Antarctic interests.

With an increasing interest in Climate Change research it is inevitable that opportunities for an expanded Antarctic-focused program will increase. Both the city and state must be ready to make the most of these opportunities as they arise.

As a Council we look forward to the future in that regard.

Alderman Rob Valentine

Lord Mayor

New CCAMLR Executive Secretary Appointed

Dr Denzil Miller will complete his second, mandated, four-year term as Executive Secretary of the 25-nation Commission for the Conservation of Marine Living Resources (CCAMLR) on 30 April 2010. His appointed successor, Mr Andrew (Drew) Wright, will be at the CCAMLR Secretariat in Hobart for a two-week handover period on 19 April 2010.

In executing his various responsibilities, Drew has 20 years of international experience in various large fisheries-focused, broader-based marine resource and ecosystem conservation, as well as fisheries management programs. He also has been involved in national-level (Australian) engagement and support

for related regional and international processes

Drew has served as the Deputy Director of the Pacific Islands Forum Fisheries Agency (FFA), as the Manager for International Waters in the Secretariat of the Pacific Regional Environment Programme, and most recently as the Executive Director of the Western and Central Pacific Fisheries Commission (WCPFC) for the past five years. ■



Right: Mr Andrew Wright

Macquarie Island: Part 1

Early history and geological value

Macquarie Island lies on Macquarie Ridge at 54°30'S; 158°57'E in the southwest Pacific Ocean. It is notoriously wet and windy, and records of its exploration regard it variously as a 'wonder spot of the world' or 'the most wretched place of involuntary and slavish exilium', perhaps reflecting the rewards and attitudes of the commentator more than on the island itself.

2010 marks the bicentenary of the formal accidental discovery of Macquarie Island by Frederick Hasselburg (later Hasselburgh and Hasselborough) in *Perseverance* on 11 July 1810. This discovery showed that there had been

an earlier encounter, perhaps two, as there were '...portions of wreckage of a large vessel of ancient design, and apparently long cast up, high amongst the tussock-grass above the shore on the west coast...' (Mawson, 1943). Captain Owen Folger Smith of the United States vessel *Aurora*, in the Sydney Gazette of 5 January 1811, reported another shipwreck high up on the grass on Bishop and Clerk Islands south of the Island. Reports suggested that the latter wreck was of La Perouse's lost expedition but this is now known to be incorrect.

Captain James Cook, during his second voyage on 17 March 1773, must have come very close to the Island but it is easy to miss because of the usual presence of low cloud over it.

To commemorate the discovery, the Royal Society of Tasmania will dedicate its Mid-Winter Lectures, on the third Tuesday of June, July and August to the topic of Macquarie Island. The talks will be held in the Sir Stanley Burbury Lecture Theatre at the University of Tasmania and all are welcome.

colonised by very large numbers of penguins and seals.

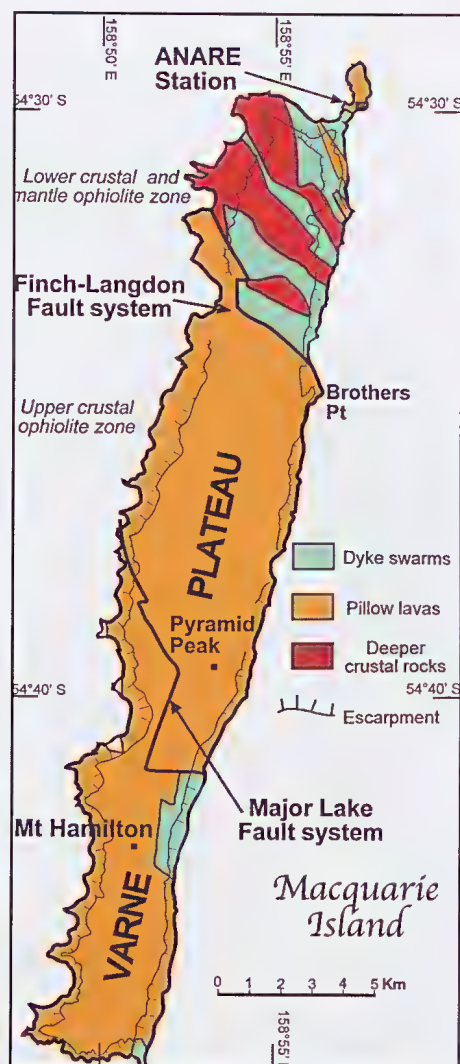
At the northern end, there is an isthmus between the plateau and a lower outcrop - North Head. This isthmus and the southern aspect of North Head are the locus of human occupation.

A valuable feature of the island is that it lies north of, but close to, the Antarctic Polar Frontal Zone or Convergence. As a consequence, it is believed to be very susceptible to the influence of global change and an ideal monitoring location. Because of its location close to so many key features, it has been the site of 50+ years of observations for meteorology, seismology, and the ionosphere as well as a location for monitoring many features such as numbers, and the rate of change, and diet of many marine mammals and birds.

Global significance

Macquarie Island and the Geology Department (now School of Earth Sciences) at the University of Tasmania have a key role in the quest to understand the origin and evolution of the world's ocean floor.

Only in the late 1950s and early 1960s did the idea of continental drift become generally accepted and with that acceptance came recognition that oceans and continents are fundamentally different in composition, origin and evolution. But, because 71% of the earth's surface is underwater, how do we get an understanding of the seafloor? It was a time when geologists discovered that the study of oceanic islands may provide clues and specialists tried to find their own islands to study. Dr Ric Varne, recently arrived at the Geology Department, thought Macquarie Island might be worth having a look at and so organised a visit there at the end of 1968. Dr Dennis Gee and I accompanied him on the trip. Earlier



Description

The island is 34 km long and up to 5.5 km wide, oriented almost north-south. It is tectonically very active with earthquakes of magnitude 6.2 or more occurring each year on average. It has a plateau surface at about 300m surrounded by steep, friable cliffs which erode easily and provide debris for beach development and landslips to the sea. Along the west coast which is exposed to the full force of wind and waves, there is wave cut terrace a few metres above sea level, up to a few hundred metres wide, and very rugged at the seaward side. The eastern side of the island is more protected and less rugged, and has a few beaches

views of the geology of the island were based on Douglas Mawson's 1943 volume on the island, written from notes and rock specimens assembled by the surveyor Leslie Blake, who had been on the island for 1911-1913. Much of Mawson's ideas turned out to be in error.

Most oceanic islands are volcanoes or remains of volcanoes; Macquarie Island is not. Varne in particular recognised that the island is a piece of uplifted seafloor, now above sea level, the only place on the earth's surface where little-disturbed seafloor can be studied in detail. This gave Macquarie Island its important role.

In the long run, Varne put a great deal of effort into having the island placed on the World Heritage List, largely on the basis of its geological uniqueness, the first such designation (followed closely by Heard Island and the McDonald Islands). It was gazetted in 1997. A few years ago, the main plateau surface on the island was named the Varne Plateau in Ric's honour.

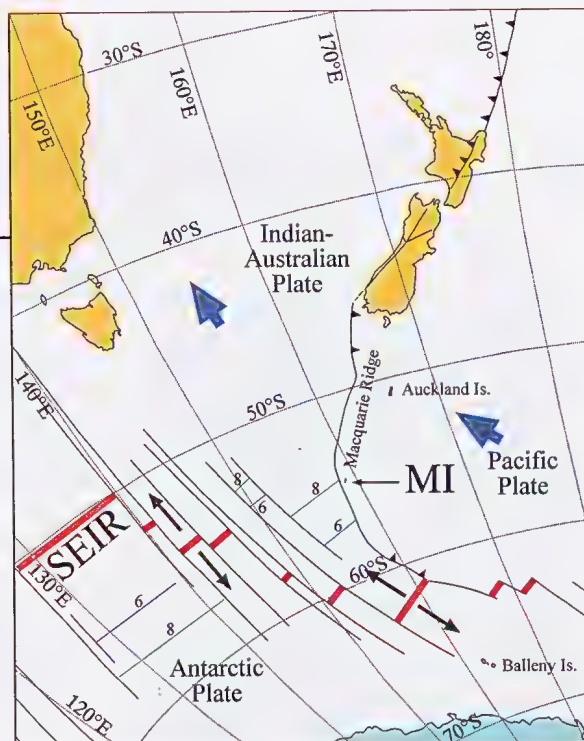
General setting

Macquarie Island is the only exposed part of a major marine feature – Macquarie Ridge which continues north and passes through New Zealand, helping to explain the volcanic and earthquake features of that country. It continues farther north and, in one form, caused the recent major earthquake near Samoa in 2009.

Part 2 describes the early occupational history and exploitation of the island

Patrick G. Quilty AM

Honorary Research Professor
School of Earth Sciences
University of Tasmania



Above: Macquarie Island (MI) as part of the Macquarie ridge.

Left: Geological map of Macquarie Island.



Sub-Antarctic Seeds



Above: Fruits of *Stilbocarpa polaris* sliced in half to show seeds. Fruits can have between 1 - 5 seeds, but three is the norm. In this set of three fruits you can see that five of the nine seeds are empty. Photo: James Wood.

Situated behind the scenes at the Royal Tasmanian Botanical Gardens (RTBG) lies the Tasmanian Seed Conservation Centre (TSCC), a seedbank facility opened in August 2005 and developed through SeedSafe a collaboration between the RTBG, the Biodiversity and Conservation Branch of DPIPWE, the Tasmanian Herbarium and the Seed Conservation Department of the Royal Botanic Gardens, Kew, UK. The SeedSafe collaboration is part of Kew's global seedbank initiative, the Millennium Seed Bank Project, a ten-year project (ending this year, 2010) that aimed and succeeded in getting over 24,200 plants species into ex-situ conservation.

The SeedSafe project has two full time staff members: James Wood Seed Bank Coordinator for the RTBG and Micah Visoiu Seed Collection Officer working for the Biodiversity and Conservation Branch.

What is Seedbanking

Seedbanking is a highly effective form of ex-situ conservation. Seed banking involves storing seeds for future use, therefore offering some insurance against the loss of plant species by extinction. The aim is to collect, dry and store seed in such a way as to be able to keep them viable for hundreds of years.

Banking or storing seeds of horticulturally significant species has been going on in some form since the advent of agriculture at least 13,500 years ago. However 'conservation seed banking' of wild plant populations is a much more recent response to the global decline of plant biodiversity. For highly threatened species, a good seed collection can often represent a far greater number of 'potential genetic individuals' (plants) than their habitat area can support in the wild.

Macquarie Island

Collections

Presently the TSCC holds over 30 collections of 15 taxa collected from Macquarie Island. Many of the collections are currently too small for effective long-term storage but this is perhaps not surprising given conditions on Macquarie and the opportunities to collect on the island.

Notable good collections are those of *Poa foliosa* and *Stilbocarpa polaris*. We have two collections of *Poa foliosa*, one of which is over 6,000 seeds. *Stilbocarpa polaris* is currently represented by seven collections, five of which are over 9,000 seeds.

In 2007 seeds of *Poa foliosa* were sown and grown on at the RTBG Nursery to supply material for a bioremediation project being conducted by Jane Wasley of the Australian Antarctic Division.

By and large germination testing of collections from Macquarie Island has shown most plants to be non-dormant and germination takes place readily at between 10°C and 20°C. *Stilbocarpa polaris* however has proven to be somewhat reticent. So far germination has only been observed to take place at 5°C and is very slow and sporadic, taking 600 days to achieve 60% germination. Further testing continues.

Azorella macquariensis

The last 12 months have seen increased involvement with Macquarie Island's flora as concern has rapidly developed on the health of the endemic *Azorella macquariensis*. So far, ten seed collections have been deposited at the seed bank to try and provide some back-up in case of catastrophic population loss. *Azorella* however is a difficult plant to collect and seed collections made so far have been very small. This could be problematic as germination within Apiaceae is frequently difficult with species typically displaying complex

morpho-physiological dormancy. Overcoming such obstacles requires larger collections to allow research.

The TSCC will conduct germination tests on most of the collections held in storage. The Germination database currently contains over 2000 tests on over 400 taxa and coverage is continually expanding. We will be updating the database several times a year to incorporate the continuing testing taking place at the Tasmanian Seed Conservation Centre. This data is freely available on the RTBG's website <http://www.rtbg.tas.gov.au/tasgerm>

In addition, there is over 28 pages of supporting content to explain the principles of seed conservation, the science of seed germination and dormancy and how the laboratory techniques used at the Tasmanian Seed Conservation Centre can be adapted to home use. <http://www.rtbg.tas.gov.au/tscoc>

James Wood

Royal Tasmanian Botanical Gardens

Marine Professionals' Meeting

The 4th Marine Innovation and Technology Forum was held on the 18th February at the Royal Yacht Club of Tasmania. The event was organised by the Tasmanian Government's Department of Economic Development, Tourism and the Arts, who have picked up the baton since the inaugural event held in August 2008 (as reported in a previous Ice Breaker).

The meeting was opened by Rob Miley of the DEDTA who welcomed the 38 guests attending, before introducing the first speaker. Stefan Stimson of Metocean Services International then gave a presentation on his time spent in Kazakhstan entitled "Oceanographic Operations in a Country of Extremes". As well as giving an overview of the Caspian region and the oceanography of the Caspian Sea, the largest inland body of water in the world, Stefan detailed the challenges faced in working in an environment where the air temperature fluctuates by 80°C, ranging from -40°C in winter to +40°C in summer.

Sam Ibbott and Kevin Redd from Marine Solutions followed and gave a presentation on their industry based work experience program called "Working on the water from A-Z".

This program was developed

by Marine Solutions to give the opportunity for grade 9 to 11 students around the state of Tasmania to experience firsthand the various marine industries including research, government and private sectors.

So far, their program has been run 4 times in the south of Tasmania and twice in the north, resulting in over 120 students benefiting from it to date, with known placements already in the fishing industry, seafood training, scuba training and in the private sector. Sam and Kevin finished by acknowledging the support that they have received from the many organisations involved in their program – a fantastic initiative appreciated by all the attendees.

The final presentation was given by Hugh Pederson from Myriax Software P/L who gave a 'hands on' presentation of their Eonfusion 4D Environmental Data Analysis Software. This software package, developed wholly in Tasmania, is a unique 4D software application that provides cutting-edge processing and visualisation of time-varying spatial data.



Included in Hugh's presentation were example outputs from the modelled predicted sea level rise data presented at the recent COP15 UN Climate Change Summit in Copenhagen; and, closer to home, video outputs of the effects of various sea level rise scenarios for the area of Kingston Beach.

Rob Miley then closed the meeting by thanking the speakers, before directing the attendees towards the bar for the all important networking opportunity, where drinks and food were kindly provided by the meeting host, Metocean Services International.

Given the high level of attendees and the ongoing interest that is being generated by these meetings, the plan is to continue to hold them quarterly with the next meeting occurring in May. For more information on this meeting or any future meetings, please email stefan@metoceanservices.com.

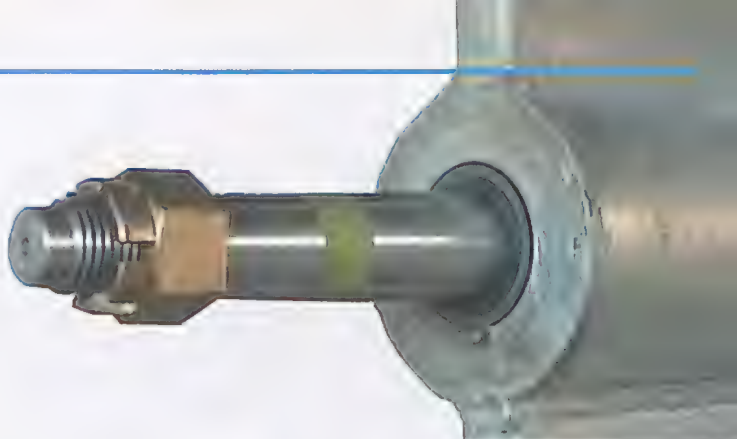
Stephan Stimson

Metocean Services International



Convergence

Stage 2 in Cebu



After completing his time as Captain of Voyage 2 on Aurora Australis, Scott flew to the Philippines to complete jobs on the yacht and await more materials. More from his latest emails...

We have spent most of the time fitting equipment within the yacht. This is quite a lengthy process as each piece of equipment has to be carted from the container into the yacht, placed in the desired position, then associated equipment and all the other equipment around is inserted to make sure access is easy for maintenance and that the different systems don't get in the way of each other. Then we remove everything and fabricate holding down brackets. These are tacked in and rechecked before final welding, drilled and tapping. The fitting process is then repeated to make sure nothing has been overlooked and then removed back to storage.

To date, the front window frames have been cut out and are just about complete (below). Once the final piece of plate arrives then a few days will see this one out of the way. The lead for the keel has been poured, and once the pin hole is line bored, then we can fit the keel.

All the hatches have now been completed and tested for watertight



integrity, as have the internal watertight doors. In addition, a propeller-viewing window has been installed, just in case I get a snag around the prop in those colder waters. As well, the two bathroom recesses/floor tubs have been measured up. These

measurements will be converted to a CAD drawing and a mould made, from which a fibreglass floor can be made.

The templates for the rope locker boxes that go in the cockpit to house the myriad of lines used that control the yacht have been a great success, so this will be constructed next week. Other little jobs completed include polishing the stainless frame for the dodger, fabricating handles for the dodger, completing the cut outs for the dogs on the aft cabin doors and positioning the hot water system along with the engine heater.

The Hydraulics guys have been to the yacht, with the lead engineer from Morse Hydraulics flying in from Manila to check the layout of the keel hydraulics, winch and the steering. He is completing drawings and then the fitting will start. The engineer is developing a system that will be able to be adapted for future fitting of hydraulic winches, as well as making each system independent to provide a redundancy for each system.

The shaft (top-right) has been inserted awaiting Mick the engineer to chock-fast the fibre tube in position. It was a great relief to see it in the yacht and lining up so well with the engine. Soon the engine can be placed in position and the pipe work under the engine installed along with the hot water boiler.

I have been to the factory where the majority of the internal furnishings will be constructed, to suit the modular layout. In the meantime the forward cabin furnishings have been fitted and look good. Just the overhead cabinets to be made here and this will be completed.

The electrics from Capi2 are due in Cebu soon and will hopefully be cleared through customs before my next meeting with the electrician. They will go through my systems and the yacht layout before designing the layout on CAD. Then we can see what other parts are required and get into the electrical fitout.

We have commenced installing the



fire fighting system lines which entail bending up 6mm ID stainless tube into a torturous shape before guiding it all into position within the yacht. A lack of available penetration glands may put this on hold, but there is the rest of the plumbing to continue with. As well, the locker to house the bilge valves allowing access from the cockpit has been tacked together (above). Just have to make the lid and cut another large hole in the superstructure then weld it all together.

Launch day feels so close but at the same time so far. It is hard not to get ahead of oneself thinking about the sea trials, exploring a few of the numerous islands up here that I've been recommended to visit and the sail back to Australia before the commencement of the charter season. ■

More than tips

A world-first research project to accurately map the underwater portion of icebergs was recently carried out near Greenland. Dr Richard Bates, from the University of St Andrews in Scotland, used a multi-beam sonar technique which mapped icebergs from all angles, the sea floor and calving ice front. The device was attached to an inflatable boat which manoeuvred along a parallel line pattern around the iceberg. The data received is then run through a computer program to produce a 3D-digital-terrain model.

In addition, a current-salinity-depth profiler was the instrument mainly used to record water current strength and direction, salinity and depth. This enabled measurement of the crucial water bodies that are causing most of the submarine melt on the glaciers. The CTD was used in front of the glaciers, in the channels, through the glaciers in cracks and moulins. This technology will be used to measure the (drastic) rates of change of the ice.

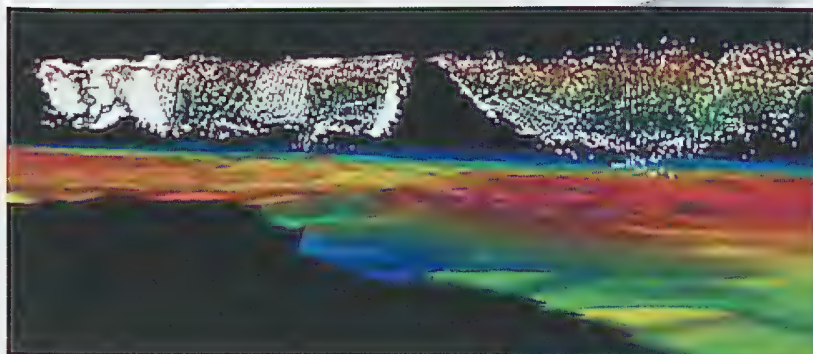
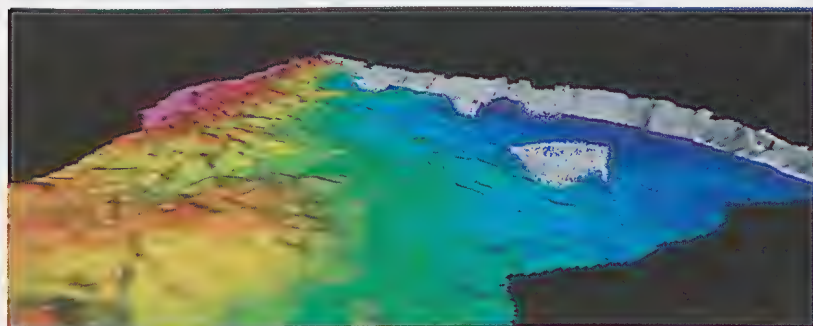
If Dr Bates gains sponsorship, he

hopes to combine this data with that gathered from above by laser scanning, to create a complete 3D image of the each iceberg. Subsequent remeasurements will reveal how fast the ice is melting.

Dr Bates was part of an expedition with Greenpeace to Greenland in 2009. Polar guide of the expedition was Eric Philips, of Icetrek Expeditions in Hobart. An article appears in the Jan-Mar 2010 edition of Australian Geographic and more photos are available from www.australiangeographic.com.au. ■

Dr Bates with the Current-Salinity-Depth Profiler

Computer images showing in colour the seafloor bathymetry, in white-grey the ice front and in white dots the underside of the icebergs.



Whale Wars

The Sea Shepherd's trimaran, *Ady Gil*, received wide media coverage during its anti-whaling clashes with Japan's *Shonan Maru No. 2*. After sustaining major bow damage and being towed towards Dumont d'Urville by another Sea Shepherd ship, *Bob Barker*, the trimaran continued to take on water and was cut loose and sank. Equipment, fuel and other pollutants were removed prior to the sinking.

Hobart was the last port of call for the *Ady Gil*, which returned twice to Hobart

with problems, before departing for Antarctic waters to meet up with the other Sea Shepherd ship, *Steve Irwin*.

After refuelling in Fremantle, WA in late January, the *Steve Irwin* returned to anti-whaling activities for another 6 weeks. Nine Japanese ships continued hunting whales until March and the Japanese Institute of Cetacean Research also chartered aircraft from Hobart, Melbourne and Fremantle to track the anti-whaling fleet.

In more recent developments, *Ady*



Gil's skipper, Peter Bethune, boarded the *Shonan Maru 2* from the *Steve Irwin* in order to make a citizen's arrest of the Captain for damaging the trimaran. However, this was seen as an act of piracy and he is being kept aboard the ship until it returns to Japan, where he will be tried.

The *Steve Irwin* called into Hobart in early March, at the end of the Sea Shepherd's anti-whaling protests near the Japanese whaling fleet. ■



Photo: Klaus Arne Pedersen

A little piece of the Sub-Antarctic in Melbourne

We are part of a crowd standing in front of a mega thick glass wall denoting a swimming pool for the King and Gentoo penguin colony at the Melbourne Aquarium's Antarctica Exhibition. 'Ooh's and Aah's' and 'Aren't they so cute?' come from the crowd, while others are nodding in agreement. How could anyone not find these fascinating creatures engaging?

The penguins are darting about in what seems to be a token swimming space, with such speed and agility, apparently unperturbed by our observation. They entertain to the max, with their play fights and the finale...a speedy torpedo-like drill through the water and a lunge onto the ice shelf, landing upright. No bowing, no, just a cursory smoothing down of any ruffled feathers before waddling back to their snoozing, preening colony mates... bravo!

Dragging ourselves away from the aquanauts and hoping that the photographs we have taken can capture accurately what we have just enjoyed, we are drawn to find the only King Penguin incubating an

egg at the penguin rookery. 'Phoenix' isn't that hard to find, with a large bulge in the white feathered abdomen just above his black feet.

This isn't the only feature that has everyone mesmerized anew. There are the striking yellow feathers against the white, and the small, black, glassy but all-knowing eyes. Superbly molded beak and rugged feet confirm their ability to withstand the subzero temperature of the ice. Most amazing are their flippers, powerful things, used for hugging as well as a swift upper cut!

The Gentoo penguins are just as likely to win an artistic award for their colours, being black and white too, but with speckled eye design to set them apart, and the most vivid orange feet. Curious...what would Charles Darwin make of those?

Watching the time, we make our way to the 'Ice Station' where the daily life of expeditioners, summer, winterers, scientists and support crew, is detailed. All the exhibits look shiny and new, giving promise of unique

adventures in a land unparalleled to life as we know it here in Melbourne: making the uninitiated pink with wonder and we former Antarcticans turn a slight green.

This exhibition is not to be missed, and is a place where you can recapture a little of that white southern land that has us entranced. Visit the Melbourne Aquarium, corner of King and Flinders Sts, Melbourne, Victoria. Ph: +61 3 9923 5999. Enjoy!

Sue Halliwell was accompanied to the Aquarium by Courtney Nelson. They both enjoyed two excursions on Macquarie Island during an unforgettable, delightfully chilly summer as part of the Aurora Expedition Ross Sea Adventure in January 2006. These magnificent avian species were fascinating to watch in their lush green natural environment and with the success of the present introduced species eradication program, their future will be ensured.



Photo: Sue Halliwell



Polar News

Wharf area changes

Tasports' long-term vision for Macquarie Wharf No. 2 Shed is to service Antarctic supply vessels and cruise ships. Recently, Carlton and United Breweries were asked to move from the Shed, which will be used as a temporary car park until redevelopments are completed over the next two years. Princes Wharf No 1 Shed is now not available for parking, as it will be undergoing redevelopment as well.

However, the decision by Tasports to leave Macquarie Wharf Nos 4 and 5 to rot from concrete cancer was not acceptable to the business community, according to Wayne Tucker, the CEO of the newly formed Greater Hobart Chamber of Commerce. Apparently, none of the State Government's profit from the sale of other Tasports assets has been reinvested in restoring these Hobart wharves, meaning Tasmania is solely reliant on northern ports for heavy freight services.

Coldest and oldest

A pack of New Zealand butter, nearly 100 year's old, was recently found near Scott Base in Antarctica. Frozen and in good condition, the butter bore the production date and symbol of the Central Canterbury Co-operative Dairy Company.

Antarctic tractors

TPN member William Adams Pty Ltd recently completed another modified Caterpillar Challenger tractor for the French Antarctic program. This is the 10th of this type completed for the French, and will be used at Dumont d'Urville. Special features include track belts for ice and snow, a sealed bonnet, heaters to keep the engine warm enough to start in freezing conditions and oil which stays liquid down to -50C. Blades and double-glazed windows were provided by

other Tasmanian companies. The next order to be completed will be 8 challengers for USA, 2 to be flown to Antarctica before February 20, 2010, and 6 by ship via Christchurch, NZ. Other similar tractors have been supplied to the Chinese.

Southern References

Robert B. Stephenson, coordinator of the Antarctic Circle organisation (www.antarctic-circle.org), will be visiting Hobart and attending the Antarctic Visions conference at UTAS in June this year (see Polar Calendar). Members of the Antarctic Circle are an informal, international group involved in non-scientific Antarctic studies. The organisation has a broad range of resources covering historical, literary, artistic and cultural aspects of Antarctic and South Polar areas and new material is always welcome.

DNA tracking

Taiwan plans to use a database of DNA samples from whales and dolphins, which are protected in Taiwan, to check whether the meat for sale has been poached. Apparently analysis can prove the meat is from marine mammals, even if poachers remove skin, fins and head.

Apology

The Southern Giant Petrel image, which appeared in the 4 previous editions in ice.edu, was incorrect. The image was an Antarctic Petrel. Thanks to Dr Keith Reid from CCAMLR for pointing this out. ■



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Editor and Production Coordinator
Anthea Wallhead

Design and layout
Robert Wallhead
David Hopkins

Research
Peter Wallhead

Printer
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Comments and contributions for future editions are most welcome.

Address Editorial Correspondence to:
Editor, Ice Breaker
240 Watsons Road,
Kettering,
Tasmania,
Australia 7155

Phone: 03 6267 4774
Fax: 03 6267 4335
Email: anthea@icewall.com.au
Internet: icebreaker.icewall.com.au

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Thanks to Klaus Arne Pedersen and Sue Halliwell for their permission to use their Antarctic photographs.

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Dr Phillip Law



On February 28, 2010, Dr Phillip Law died at the age of 97, at his nursing home in Melbourne. Dr Law established the Australian Antarctic Division in Melbourne in the 1940s, and as the former Director of the AAD, he is also credited with the creation of Australia's three Antarctic bases: Mawson, Davey and Casey.

A friend of Dr Law, former Governor of Tasmania, Sir Guy Green, says he will be fondly remembered. "He made a tremendous contribution to Australian Antarctic involvement and indeed

he made a contribution to the world involvement in Antarctica."

In his later years, Dr Law was a frequent visitor to Tasmania for Antarctic Midwinter Festival events, including the Phillip Law Lecture that was set up to honour his achievements and to publicise others who had achieved Antarctic success in their fields.

Dr Law's nephew, Tasmanian conservationist Geoff Law, says his uncle lived a productive and inspirational life. "He was a great

scientist, an administrator, an educator, an adventurer, but will be most remembered as an explorer of the Antarctic and the pioneer of Australian permanent settlement on the Antarctic continent."

A memorial service will be held for Dr Law in Melbourne, probably on his birthday on April 21, 2010. ■

Photo: Sue Halliwell

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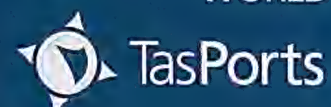
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Polar Publications



Book

The Heart of the Great Alone

by David Hempleton-Adams,
Emma Stuart and Sophie Gordon

Published by Bloomsbury

Price: \$75.00

Contains photographs by Herbert Ponting from Scott's 1910 Antarctic expedition and Frank Hurley's from Shackleton's 1914 expedition. All images, some never seen before, are from the Royal Collection and have extended captions.

Book

The Ice Beneath My Feet - My Year in Antarctica

by Diana Patterson

Published by ABC Books

Price: \$35

Describes the author's year as station leader at Mawson in 1989. Diana was the first Australian woman to achieve this position, and her book covers her activities over 14 months.

Film

Arctic Blast

Writer: Jason Bourque

Director: Brian Trenchard-Smith

A Tasmanian-made film about a huge ice fog caused by a rip in the Earth's upper atmosphere over Antarctica. The fog grows as it moves northward, killing everything in its way. Due for a May 2010 release.

Website

The Forgotten Story of Inuit Whaling

inuitwhalers.ca/en

Traces the history of Arctic whalers, who also helped European whalers from the 1500s.

Website

The Australian Antarctic Division's 10-year Draft Antarctic Science Strategic Plan (2011/12-2020/21) is now available for viewing and comment.

www.aad.gov.au

Book

A Chronology of Antarctic Exploration

by Robert K. Headland.

Published by Bernard Quaritch Ltd. 2009.

Price: \$250 (approx)

As its summary describes, this book is 'A synopsis of Events and Activities from the Earliest Times until the International Polar Years 2007-2009'. There are 4,685 entries covering over 5000 expeditions carried out from the far-south oceanic islands to the continent of Antarctica and its off-lying islands. This book was developed from Robert's previous work, the Chronological List of Antarctic Expeditions and Related Historical Events, published in 1898 and 1993.

Book

The Nature of Ice

by Robyn Mundy.

Published by Allen & Unwin.

Price: \$26.99.

A novel about a photographer facing her marriage breakdown while in Antarctica, interwoven with historical references to Mawson's 1911-1914 expedition.

Book

Surviving Erebus – An Antarctic Adventure on Board Her Majesty's ships Erebus and Terror

by John Barell.

Available through Borders book shops in Australia.

A lively story based on accurate geographical references and the history of Erebus' chartering of over 1000 miles of Antarctic coast.

Book

Antarctica: A Call to Action

by Sebastian Copeland.

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POLAR CALENDAR

1-7	March	2010	Sea Week
6-13	March	2010	Arctic Winter Games, Grande Prairie, Alberta, Canada – involving athletes and cultural performers north of the 55th parallel
11	March	2010	Tasmanian Polar Network meeting. 11.00am-1.00pm. CCAMLR, Macquarie St, Hobart, Tasmania.
13-16	April	2010	Arctic Science Summit Week. Nuuk, Greenland
3-14	May	2010	Antarctic Treaty Consultative Meeting XXXIII and Commission for Environmental Protection XIII. Punta del Este, Uruguay
23	March	2010	World Meteorology Day
27	May	2010	TPN meeting (to be confirmed)
30	May	2010-	International Whaling Commission meeting. Agadir, Morocco.
11	June	2010	
31	May	2010-	International Symposium on Sea Ice. Tromso, Norway
4	June	2010	
5	June	2010	World Environment Day
8	June	2010	World Ocean Day
8-12	June	2010	International Polar Year Oslo Science Conference. Oslo, Norway
18	June	2010	Melbourne Midwinter Dinner
19	June	2010	ANARE Club Midwinter Dinner. Hadley's Hotel, Hobart. Contact mimacarr@gmail.com for bookings
21	June	2010	Winter Solstice
21-23	June	2010	Antarctic Visions: Cultural Perspectives on the Southern Continent, University of Tasmania, Hobart, Tasmania. Conference focussing on the ways Antarctica is represented in the arts, social sciences and humanities. For more information www.utas.edu.au/ejel/antarctic_visions or email Ralph.Crane@utas.edu.au
23	June	2010	Country Midwinter Dinner, Binalong, NSW Phone (02) 6227 4259
26	June	2010	Sydney Midwinter Dinner. Epping, NSW. Contact www.suburbia.com.au/~anarens
30	July	2010-	XXXI SCAR and Open Science Conference. Buenos Aires, Argentina
11	August	2010	
14-22	August	2010	Science Week. International Year of Biodiversity
26	August	2010	TPN meeting (to be confirmed)
7-11	September	2010	World Seabird Conference. Victoria, Canada. Contact www.worldseabirdconference.com

For further information, see www.environment.gov.au/about/mefia/events and www.scar.org/events

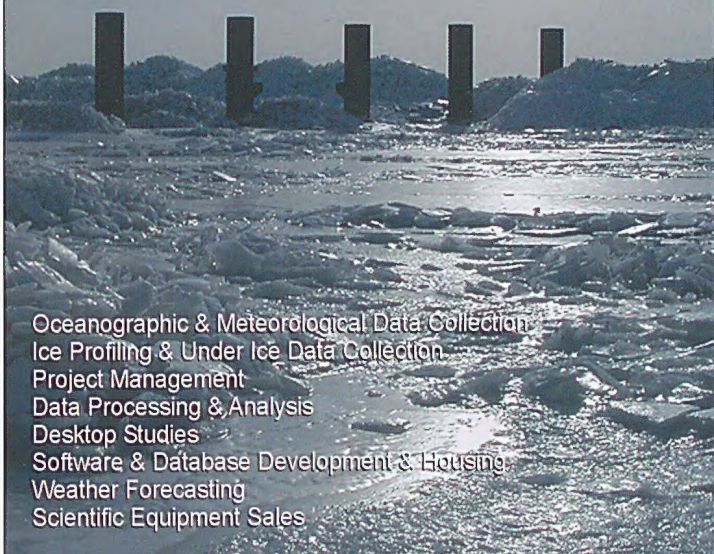


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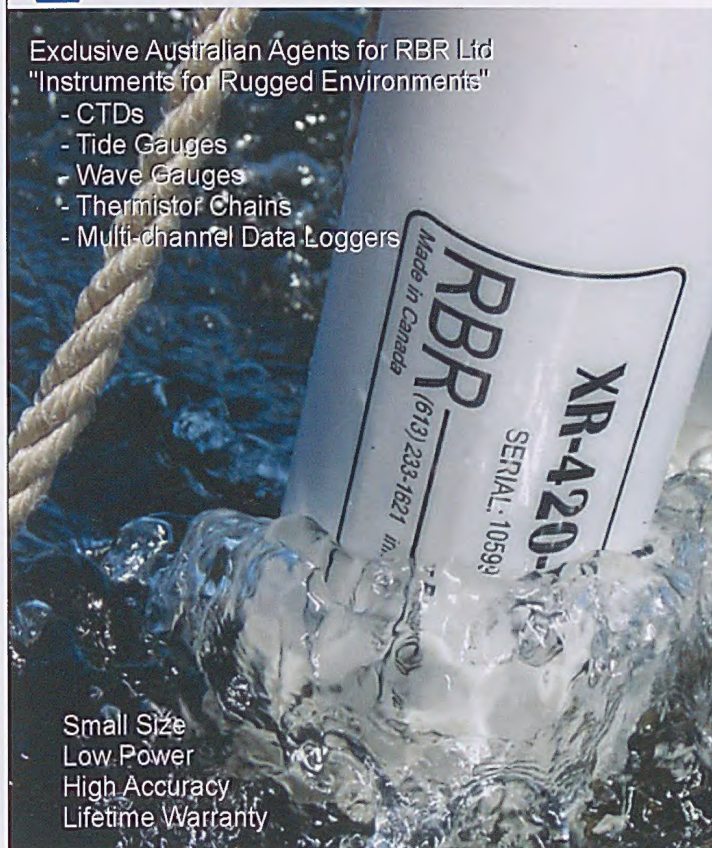
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Shipping

8-10	March	2010	Aurora Australis	V3	Arrives Hobart, departs for Davis Station.
8	March	2010	Tangaroa	VY1	End Antarctic Whale Expedition.
15	March	2010	Tangaroa	VY1	Arrives Wellington NZ. Off-hire.
22	March	2010	Aurora Australis	V4	Davis Station.
2-10	April	2010	Aurora Australis	V4	Macquarie Island.
13	April	2010	Aurora Australis	V4	Arrives Hobart. Off-hire.
16	May	2010	Aurora Australis	VE1	Departs Hobart for Macquarie Island for Pest Eradication Project.
19	May	2010-	Aurora Australis	VE1	Macquarie Island.
8	June	2010			
11	June	2010	Aurora Australis	VE1	Arrives Hobart. Off-hire.

Macquarie Island Pest Eradication 2010

Keith Springer will be the project manager on Macquarie Island during the aerial baiting this winter. The work to be done in May will be to unload the vessel and establish bait and fuel depots prior to the commencement of aerial baiting operations, which are expected to commence in early June and continue for two or three months. Four Squirrel helicopters will be used. Further information on the project can be accessed at <http://www.parks.tas.gov.au/index.aspx?base=13013>



Italy's icebreaker, Italia. Photo: Klaus Arne Pedersen.





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